THE FARMERS' CABINET,

Devoted to Agriculture, Horticulture, and Rural and Domestic Economy.

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From the Visitor.

Draining and Sub-soil Ploughing.

The value of deep trenching of the soil seems not to be generally understood in this country. In the renovation of lands that have long been cultivated, there cannot be a doubt that the stirring of the under or sub-soil, where it is hard, and the bringing it gradually to the surface, *as fast* as a qualifying stimulant to the soil can be furnished in each season of cultivation, to be mixed with the under soil — *but no faster* — will be the most effectual method. In England, this principle of cultivation—applicable to every country under heaven—is operating in a vast increase in the products of agriculture. We are not, in this country, far enough advanced to be able to profit much by this system, yet we do not doubt, if labour should be applied to land of little value, in under-draining and sub-soil ploughing, it would turn in the end to immense profit. We lately passed a spot of ground near Worcester, Massachusetts, which was purchased about two years ago, for the use of the Insane Hospital at that place — the price of the land, from its contiguity to the village, was eighty dollars an acre. It was a rocky hillside, the upper part of which furnished pasture, the lower part being a heavy soil, through which cold springs oozed from the surface, producing little or nothing in its natural state. Ditches have been dug on this land, at suitable distances, for carrying off the water; and in these ditches, below where the plough ever strikes, were placed the many stones, which could well be spared from off the land. The field has been ploughed deep, and after the application of no very extraordinary quantity of manure, it was laid down to grass; and the result is, a product of from two to three tons of excellent hay per acre; and while passing this ground in April, it might be distinguished from the surrounding crops, by a more forward vegetation.—We add the following "on draining,"

FROM AN ENGLISH PUBLICATION.

I am of opinion that small stones form the best filling for drains, both as to efficiency and permanency; and are cheapest, where stones are plentiful; the draining tile, however, is a very ready mode, and applicable in clay districts. It is painful to witness the practice, still very common, of filling drains too near the surface either with stones or tiles; for it is obvious, that the deeper the drains, the better they draw; and as all drained land ought to be sub-soiled with the plough, working across the drains, these, if filled nearer than about eighteen inches to the surface, will be in danger of being injured by the foot of the plough in passing. After the draining has been completed, the land may be seeded with oats, and after the crop has been removed, then is the time to go over the whole field with the sub-soil plough, crossing the lines of the drains at about right angles. I have been often asked if I would recommend sub-soil ploughing of land that had not been first drained? to which I answer, *certainly not*, for until there is an escape for the water through the sub-soil, any opening of it would rather tend to injure, than to improve the soil; these openings may, however, be *sometimes* found, where the sub-soil consists of gravel or sand, forming a crust over a lower stratum of loose sub-soil, when the sub-soil plough might provide a passage for the water, and leave the incumbent sub-soil open for melioration; but draining ought always, to make sure of success, to precede the use of the sub-soil plough. *Thorough draining* is the foundation of all good husbandry; and when combined with deep ploughing, insures a general and uniform fertility, assisted no doubt, by the essentials, *thorough working and cleaning, ample manuring, and a proper rotation of crops*—the four cardinal points of agriculture.

It is hardly possible to estimate all the advantages of deep and dry land — every operation in husbandry is thereby facilitated and cheapened; less seed and less manure produce a full effect, and the chances of ob-

taining a good and early tilth or seed-bed, are greatly increased; and there can be no doubt that even the climate itself will be much improved by the general prevalence of dry and deep land. Since the introduction of this great improvement into practice, the intrinsic merits and evident results of the system have raised its character, even with many of its former opponents. All who have ever studied or experienced the most common culture of a garden, must be aware of the advantages of deep working, and when this can be obtained in the common field culture, they will readily believe that crops will be more than doubled in every succeeding grain crop, and abundantly, even in pasture; the cattle feeding upon which will be relieved from those epidemic complaints, murrain, &c., which, it has long been ascertained, are to be attributed in a very great measure, to wet and unhealthy pastures, upon which fogs will hang for hours after they have been drawn off and evaporated from dry and healthy meadows and pasturage. When land has been thoroughly drained, deeply-wrought, and well-manured, the most unpromising and sterile soil becomes a deep and rich loam, rivalling in fertility the best natural land of the country; and from being fitted for raising only scanty crops of common oats, will produce good crops of from thirty-two to forty-eight bushels of wheat, forty to sixty bushels of barley, and from forty-eight to seventy bushels of early oats, besides mountains of root crops, which all good agriculturists know, are the abundant producers of mountains of manure. There is no want of employment for all spare labour and capital of the country in the *general, thorough cultivation of the soil;* and if properly conducted, it will afford ample remuneration to the individual possessors and farmers of the soil; while the wealth of the country, its health, its morals and happiness, will be increased a hundred fold.

The cultivation of the inferior soils, will tend to lower the value of the high-rented lands, but the general value of them will be much increased; whilst the varieties of agricultural produce can be afforded at a lower rate, thereby affording a cheaper sustenance to the manufacturer and artisan.

The knowledge of agriculture is still in its infancy; often has it been thought, during the progress of manufactures, that the perfection of these arts had been attained, when, by the application of science, capital, division of labour, or industry, or all these together, some new and extensive step was gained, whereby the cost of production was cheapened; then followed a lower selling price to the consumer, *and immediately the field of consumption was extended!* In most of these cases, these steps of improvement were urged more by the necessity arising from low profits and extensive rivalry, than from the encouragement of high profits and extensive demand; and so is it now operating with the agriculturist—during the reign of high prices, any sort of farming was sure to pay, but now, when prices are low, nothing but skill and industry, and a well-regulated system of management will do; and since high prices are scarcely to be looked for, the only trust of the land-owner and the farmer is in the use of every means to produce their articles cheaper and in greater quantity, *from the same extent of land.* From the progress which the new system of husbandry, and especially drainage, has made, the lists are fairly entered by the hitherto considered poorer soils against the rich; the rivalry cannot be stopped, and the result will shortly be, a greater agricultural advancement throughout the country than has ever before taken place; the grand natural prompter, *self interest*, will in due time work out the result.

From the Southern Cabinet.

Durham Cattle.

It is affirmed that the Durhams are too delicate in their construction, require more feed, and are more unsuited to our climate, than any other breed of cattle—my experience is directly the other way—for under *proper* treatment, they have fulfilled here the respective characteristics they have borne elsewhere. All cattle imported, before they become acclimated, must undergo the same changes of constitution as foreigners, coming for the first time amongst us; and if you expect that cattle from Europe, where they are housed and fed on the richest and best food, shall keep healthy and fat when turned out upon our razor-shaved meadows and corn-stalk fields, you will be sadly disappointed. Most of us, at a very high price, import the Durham cattle when *fully grown;* their constitutions already formed, and accustomed to the climate from whence they came; and it is almost impossible for them to undergo, without serious injury, the change required here. Now, were we to import at a much younger age, the result would be very different; for, while out of twenty or thirty bulls and cows imported from Europe, the north, and Kentucky, during the past year, I know but of three or four now surviving, while of the same number of *calves*, I know of as few that have not stood our southern climate.

Three years since, I purchased in Charleston a Durham bull calf one year old; I

turned him amongst my common cattle, and only housed and fed him at night; he is now one of the finest bulls in the state; and his present owner informs me, that upon the common marsh-pastures he has kept fatter and in better health, than any of his common cattle. By this bull when but eighteen months old, I got twelve calves; the pasture upon which they have fed is bad, and yet they have grown to twice the size as calves from other cows by a common bull, and many of them at one year old were as large as their mothers. I now own a white bull, which I raised by the bottle until six months old, and then turned to pasture, feeding him as I did my other cattle; at one year old I put him to sixteen of my cows, and have, this season, sixteen of his calves; and though from common cows they are remarkable for size and beauty. One of these calves, from a very inferior cow, I sent to the market with two other calves from good cows, by a common bull—the calf by the Durham bull, although four weeks younger, brought twelve dollars, while the other two brought only eight dollars apiece. I hesitate not to say, the Durham cattle feed closer, live on coarser food, grow larger, and give more milk than any other cattle which can be produced in our climate; their butteraceous qualities, like those of all other breeds, depending on the quality of the food they get. I once owned a Durham cow, which, by a particular mode of feeding, I could make give thirty quarts of milk a day, and yet the same milk would not yield as much butter as when I fed her to give but twelve or fourteen quarts. I have also some calves from the most beautiful Devon bull ever brought to this country, but they are not equal to the Durhams. I have a full-blooded Durham heifer, two years old, which has been raised entirely upon one of the poorest pastures in our low country, which for size, beauty, and every other qualification, I can place against any full-grown Devon, Ayrshire, or other cow I have ever seen; and yet, from a calf, she has lived on the common pasture, has scarcely tasted corn or grain, and both she and the young bull live on the same pasture with my other cows, and are more thrifty.

It is said, that to have this breed of cattle in their fullest perfection, you must feed high—so you must—but in the low country, where we must have a large herd of cattle, we cannot afford to do this; must we then, on that account, have nothing to do with this valuable breed? by no means, for if we cannot obtain them in the perfection in which they are found in Europe, we may, nevertheless, introduce them to improve our common breed, and any one who will do this only, will obtain much. For one hundred dollars, a Durham bull calf of the purest breed can be obtained in Charleston; at one year old he is fit to put to cows, and from what I have witnessed, I think the get of bulls at this age the best: I have tried them from one to five years of age, and find the calves of the former *always* the finest in form and size, and have satisfied some of the most skeptical upon this point, although, when I first advanced this doctrine, I was laughed at, because contrary to the *experience of the country:* and every one, who will pay attention to the matter, will find, that even amongst his common cattle, the finest calves are by his youngest bulls, and my old cow-driver, who has had forty years' experience, vouches for this fact. I am opposed to none of the other breeds of cattle, the object of this being to prove, that the introduction of fine cattle amongst us will improve our native breeds, and that too, on our worst pastures. From my own experience then, as well as that of others, I am fully convinced that calves bred from Durham bulls, will suffer drought, inattention, and even *starvation*, better than calves from the native breeds.

B. R. Carroll.

Root Culture.

The raising of roots for cattle and swine is yearly becoming more common; this is an improvement in our husbandry. Taking a succession of years, and a variety of kinds, roots may be raised at an expense of twelve and a half cents per bushel, perhaps for less. As aids in working off the coarse kinds of fodder, while the stock is kept in good condition; as means of increasing the quantity of milk, beef, pork, and butter, on the farm; and not least, as agents in enriching and increasing the manure heap, they fully repay the expense which obtains them. Taking cost and worth into the account, perhaps neither the ruta baga, sugar beet, or carrot, is to be preferred to the exclusion of others. Let them all be cultivated; but for milk cows the sugar beet will probably be preferred, for horses and swine the carrot. One winter's trial with two horses has proved, that a peck of carrots per day is quite as good for a horse as four quarts of oats; and when boiled, swine thrive well upon them. One-eighth, and perhaps a larger portion of all the land which a farmer cultivates, may profitably be apportioned to the root culture. —*Franklin Farmer.*

The more pressing is the *call*, the more ought we to be convinced of the necessity of paying immediate attention to it.

Dialogue Continued—Cultivation.

Sykes.—Poor Grabb! he 's a kind-hearted man, truly; but if his father had not lived before him, and left him at his death, the fine farm which he so miserably manages, he would, by this time, have been in the almshouse. It is a pity, however, that he did not do a little in the way of cultivating his son's *mind* at the same time — his *sub-soil* must be in a wretched state, I guess. Well then, neighbour, my team shall be here by peep of day to-morrow, to join yours; and as I wish to drag, and roll, and harrow, three times in a place, the field designed for turnips, we must make up our mind to stretch a point, and complete it before we leave; and they can then collect the weeds and burn them the next day. My heart aches when I look at the poor widow of an excellent friend, and her bereaved little ones, and I have made up my mind and my vow, if God spares me, to assist her in her trouble, until her fine lad is capable of taking a father's place, and work for his poor mother and sisters.

Father.—My noble friend, I must partake with you in that luxury, and I shall not only be ready and willing, but be *glad* to meet you at any time with heart and hand!—God bless you—good bye.

Frank.—What a contrast! I think, however, that there must be a difference in the nature of the *tree* as well as the soil — the fruit is so very unlike.

Father.—No doubt there is, but cultivation will always work wonders.

Frank.—How droll to hear Grabb talk of a song! It must be a gloomy one to fit his state of mind; I should like to hear it.

Father. — And so it is — words and tune: it is one of Dibdin's happiest efforts; and you must fancy it, sung in the most doleful strain, to a tune in the minor key.

We bipeds, made up of frail clay,
Alas! are the children of sorrow,
And though brisk and merry to-day,
We all may be wretched to-morrow.
For sunshine 's succeeded by rain—
Then, fearful of life's stormy weather;
Since pleasure can only bring pain,
Let us all be unhappy together.

Frank—Capital! but how would you reclaim a soil so sour, cold, and sterile, and which produces such crabbed fruit, as that of which Grabb is the similitude?

Father. — Oh nothing is easier or more agreeable: I would remove the soil from about the roots to a good depth and distance, and fill the opening with fresh mould, mixed with a copious supply of lime; prune very close, and leave the event, trusting to the sweetening influence so beautifully expressed by the Methodist preacher, "lime to a sour, stubborn soil, is like the grace of God to a wicked man's heart."

Frank.—I should like to try the effect of such liming in Grabb's case, for, poor fellow, he is so miserable, that I expect he is as great an object of charity and commiseration as Mrs. Williams and her poor family —is there nothing that can be done for him?

Father.—I fear not.

Frank. — And yet, you said, cultivation will always work wonders.

Father. — That 's good — and so it will: and suppose that I get Sykes to assist us to take him up and carry him, as though he were a *bereaved widow?*

Frank.—Oh! pray do, I will be answerable for him; at present he appears quite friendless and miserable, within doors as well as without—as he says.

No. 9. The rich and healthy surface and poisonous sub-soil. This is an interesting case—shall we take the beautiful Newington peach tree, which flourished so finely for two years in our garden, and died so prematurely last year? I think we shall find the analogy complete. That fine tree was trained with the greatest care in the nursery, until it was fit for transplanting into the garden, when the soil, a firm, rich hazel loam, was trenched, and cleaned, and limed for its reception. The first season after its removal, it bore much fine fruit, of the most delicious flavour, and large, handsome appearance, bringing them all to maturity, and perfectly ripening its wood. The next season it bore most abundantly, and made noble shoots, which required no pruning or heading back; its blossoms were remarkably large, and of healthy appearance; both fruit and wood were well ripened, and fully testified the care and attention which had been exercised in its culture from the first.

On the appearance of the blossoms the next spring, they were observed to be much smaller, and paler in colour; and although the fruit set well, many fell off when they were the size of peas; and at midsummer, many of the under leaves withered, and fell from the branches. Before Michaelmas, the colour of the foliage had completely changed; the fruit ceased to grow, and the tree was declared to be infected with the disorder, called the *yellows.* The worms had made sad havoc beneath the bark near the ground; nor was it a matter of surprise when, on the opening of the last spring, not a bud or blossom made their appearance — the tree was quite dead. On removing it, I was determined, if possible, to learn the cause of such premature decay and sudden death, and therefore very carefully removed the earth from about the roots, laying them quite bare, without wounding them. All appeared

healthy, and the soil in the finest condition imaginable, until I discovered, that a small and tender root had extended itself, until it had reached a small oozing of water, the colour of the rust of iron, which proved to be the head of a mineral spring of the strongest quality. This small root was decayed, for a considerable way towards the body of the tree, and at least three feet from the source of the evil; and this was, no doubt, the cause of the disease and death of the finest tree I ever saw.

Frank.—How very strange, that so trifling a circumstance as the point of a small root reaching a little water at such a distance from the tree, should be the cause of such sudden destruction!

Father.—It is; but to show you how certainly this *was* the cause, I will copy from our favourite Tull an account of some experiments, which he made expressly with the view of showing the truth of the position, that vegetables will take up and circulate indiscriminately, the most deleterious, as well as the most wholesome substances; and that they often do, to their destruction.

Exp. 1. "I put a mint stalk into a glass of water, but I immersed *one string* of its roots, being brought over the top of that glass, into another glass of salt-water, contiguous to the top of the other glass—this mint very soon died.

Exp. 2. I put the upper root of another root into a small glass of ink—this plant was also killed by some of the ink ingredients.

Exp. 3. I made a very strong liquor, with water and the bruised seed of the garlick, and placed the top of it close to the top of another glass, having in it a mint plant, two or three of whose upper roots put into this stinking liquor, and there remaining—it killed the mint in some time; and when the edges of the leaves of the mint began to change colour, I chewed many of them in my mouth, and found at first the strong flavour of the mint, but that was soon over, and then the nauseous taste of the garlick was soon perceptible." So, you see, how readily plants, whose roots reach to a poisonous sub-soil, imbibe and circulate to their destruction the deleterious matter. I once grew some turnips on land having a wet sub-soil, and on storing them for winter use, I observed that the point of the tap-root of every one was decayed; but as that was not near the bulb, I did not consider the circumstance of any consequence. On opening the pit in the winter, however, I found that three parts of them were rotten, and the stench arising from them had infected the remainder, so that the cattle refused to eat them.

Frank.—How satisfactorily you have accounted for the decay and death of our favourite tree! what a pity that you could not have ascertained the cause during its life-time, as it might so easily have been prevented, merely by dividing that small root from the body of the tree!

Father.—Truly; but the lesson has not been lost upon us, for you know I have recovered many trees that have been infected by the yellows and worms, by trenching and dressing the water with lime, and removing the bad soil from amongst the roots. And now, do you know any young and promising individual, whose untimely death might be likened to the decay and death of our favourite tree?

Frank.—Yes, Henry Templeton.

Father.—Exactly—of an excellent and highly-respected family, he was the brightest hope—an only son—with a mind and body cast in beauty's mould, he was truly "the observed of all observers:" even in the nursery his education had commenced; and the wisdom displayed by his amiable parents in this particular, was crowned with perfect success. His youth was spent in acquiring knowledge of the most useful and valuable kinds; and the commencement of his public life, which might be compared to the planting out our tree from the nursery, was hailed by his friends with the brightest expectations. We well know the esteem and respect which he won from all who knew him, while his gentle, and amiable, and refined manners, were the admiration of every one. I remember the time when he commenced the study of the law, under counsellor S., and how fortunate his family considered him in the choice of his fellow-student, Charles E., as his particular friend—alas! that very circumstance proved the total ruin of him, and the hopes of his family; for Charles E. was a young man addicted to every species of vice and wickedness, and possessed of the most consumate hyprcrisy! on one fatal evening he prevailed upon Henry to accompany him to the gaming-table, and his destruction was sealed.

In a short year from this time, he returned to his father's house, an emaciated being—his health destroyed, his mind frenzied, and in the last stage of consumption, only to sigh out his soul in penitence in the arms of his broken-hearted parents and sisters! Poor Henry Templeton! one small root, penetrating to the poison in the sub-soil, was the cause of indescribable suffering, misery, remorse, anguish, and death to himself, and distress unspeakable to his tenderly attached family, and a numerous circle of young and much-loved friends.

Frank.—Poor Henry Templeton! who would have thought that we could find so

true a portrait of him in our beautiful and unfortunate peach-tree!

Father.—But here is one more soil for examination.

No. 10. It is, to appearance, a happy mixture, and in the highest state of cultivation; but the tree which is planted in it makes no progress. It is not diseased, but can scarcely be called healthy; it blossoms in season, but seems not to possess energy sufficient to bring its fruit to perfection; and although when produced it is fair to the eye, it has little flavour, and soon perishes. Its shoots are not deformed, nor do they require much pruning; but the foliage has a weak and tender appearance, although it cannot be denominated sickly. Its bark is thin and clean; and its foliage does not fall or change colour prematurely, but it makes no progress—there is no strength in its growth, and yet there is no sensible defect—an ornamental tree, but of very little value, although of the choicest fruit-bearing species.

Frank.—Why, what can be the matter with the tree, then?

Father.—Nothing—the *matter* is in the soil, which has been too highly manured, and made light and porous by such frequent dressings—in fact, this tree might be compared to a rich, indolent, unemployed young man, eaten up with *ennui!* no disease, but no health—no pain, but no pleasure—with energy sufficient to put forth a blossom, but not enough to bring it to perfection—no fear of dying, but no hope in living—blameless, but praiseless—does no harm, nor any good, and may as well be dead as alive!

Frank.—Well, I would not be a gentleman if I could! But how would you set about curing such a nameless disease?

Father.—*I would try it with affliction.* I would open the ground about the roots, amputate some of them, and mix clay and lime with fresh strong loam for filling in; and then I would prune close and hard, shrouding the branches pretty close to the body of the tree, and await the result with confidence.

Frank.—Well, these would be *pretty hard lines*, as Grabb says.

Father.—Yes, but I have known many such characters, who have had abundant cause to exclaim, "It is good for me that I have been afflicted." You know there is the son of old Judge Thomson, who, while his wealth remained with him, has often complained of the trouble of eating, and could not bear the idea of walking abroad, even on the score of health; was charitably disposed, but could not prevail upon himself to use the least exertion, even were it to save a fellow-creature from starving: it is even said, that, when in a passion with his servants, he has declared that he would kick them if it were not so much trouble! But the fire which destroyed his wealth, purified and sanctified his soul;—he is now happy because he is industrious; cheerful because usefully employed; and finds it no painful exertion to walk miles to render service to a suffering neighbour. He is now rich in good works and sound bodily health; and often exclaims "it is good for me that I have been afflicted!"

Let us close by reading Dr. Drenman's beautiful hymn,

THE FRUITS OF BENEVOLENCE.

The husbandman goes forth a-field,
What hopes his heart expand!
What calm delight his labours yield,
A harvest from his hand!

The nobler husbandry of mind,
And culture of the heart—
Shall such with men less favour find?
Less genuine joy impart?

Ah! no—your goodness strikes a root,
Which dies not, nor decays;
And future life shall yield the fruit,
That blossoms now, in praise.

The youthful hopes, which now expand
Their green and tender leaves,
Shall spread a plenty o'er the land,
In rich and yellow sheaves.

Thus, a small bounty well bestow'd,
May perfect heaven's high plan;
First daughter to the love of God,
Is charity to man.

'Tis he, who scatters blessings round,
Adores his maker best!
His walk through life is mercy-crown'd,
His bed of death is blest.

J. P.

Science.

The application of science to practice has convinced our most intelligent farmers of the great importance of mixing soils of various kinds—of the advantages of dressing sands with clay, and vice versa. They have been taught the great utility of conveying to the cattle-yards those soils which consist chiefly of vegetable matter, and of neutralizing their acid properties by mixing the same with lime; and no good farmer will neglect to have a plentiful supply of compost manure in his yard, or in large heaps in his fields; for this purpose he will collect all animal and vegetable substances within his reach. The profits of farming depend much upon the quantum of the nutriment judiciously mixed in the soil. By scientific investigations he may have the peculiar food which the several species of plants require. The composition of soils in the different parts of the Union, and even in different sections of the same state, present a great diversity, and this, although in all the same simple elements may be combined, the simple material elements being variously compounded,

even on the same farm, if it consist of hill and vale; and if the nature of these elements, and the vegetable matter of which they are compounded, are not understood by the farmer, his hopes of favourable crops will often be disappointed.—*Yankee Farmer.*

Beet Sugar in France.

The manufacture of beet sugar in France is still on the increase. The amount of duties received into the treasury for beet sugar, for the first quarter of 1839, was one million two hundred and sixty-two thousand francs; amount received the corresponding time of 1840, one million four hundred and forty thousand; increase in the quarter, one hundred and seventy-eight thousand francs.

Good Husbandry.

The editor of the Maine Cultivator, (Mr. Drew of Hallowell,) cultivates but a single acre of land, but this he does in such a manner as to obtain from it an astonishing amount of produce. The following account of the management of his garden will, no doubt, interest many of our readers:

One-third of an acre he devotes annually to corn — the long-eared, large kernelled, eight-rowed yellow corn, that is not very early, and not very late. With him it has ripened every ten years that he has cultivated it. The soil he makes rich. He applies to it, before ploughing, at the rate of eighteen or twenty cords of long manure to the acre, (or six to the third of an acre,) and turns it under by the plough. He plants the hills three feet and a half apart one way, and three feet the other — exactly by measurement with a line; in each hill he deposits either a shovel full of old rotted hog manure, or as much light manure as will not overstimulate the crop. From this third of an acre he has realized, on the average for years, over thirty bushels of sound corn for grinding, besides a little gig corn for hogs in the fall of the year. This is as much corn as he needs in his family; besides a sufficient surplus for fattening one large or two small hogs. From the same land, he ordinarily obtains some two or three hundred pumpkins, which serve important purposes in the family, besides being an excellent article for boiling up with the hogs' potatoes, giving a cow, &c. From the same land, too, he has generally obtained all the dry white beans he has needed in his family to go with his pork —which he raises by the avails of his land, without purchasing of others. The corn fodder is carefully cut and cured, and helps as a subsistence for the cow. So much for one-third of an acre.

A small portion of land is set apart for the culture of onions. Ordinarily, he raises from fifty to seventy bushels on a bed, say half a dozen rods square. These he sells on the average at one dollar per bushel — say for sixty dollars per year. This purchases his flour and rye at common prices. So that from the first, the third of an acre, and an onion bed, he raises all his bread — brown and white.

On two other large beds, he grows generally about fifty bushels of mangel wurtzel and carrots. These are for the cow's winter provender. They more than pay for themselves in the milk and butter, to say nothing of the saving of hay and other provender. With a very little hay, together with the corn fodder and roots, a good cow—and he finds it economy always to keep the best—may be kept through the winter.

Potatoes for summer and autumn use are planted on the margins, and wherever there is a vacant chance for a hill; and a department is expressly devoted to them, large enough to raise all that are wanted for the table—and enough to spare for the hogs, &c.

So far relates to bread, butter, pork—and he might add, poultry.

Then the rest of the land is devoted to—too many things to mention here — beets, parsnips, cabbages, turnips, green beans, peas, green corn, cucumbers, melons, squashes, (summer and winter sorts,) &c. &c., besides fruits and flowers of various kinds—grapes, Antwerp raspberries, black do., currants, (white, red, black and yellow,) English and common gooseberries—and a few choice apple, pear, plum, cherry, peach and quince trees. All this is from a single acre, which he cultivates most with his own hand.

To the Editor of the Farmers' Cabinet.

Beech, for Water-pipes, &c.

Sir, — On a late visit to a friend in the country, I found that his household establishment, which is situated on a hill, is supplied with the purest water from a spring, rising in a meadow far below, by means of a forcing pump of the simplest construction, and which is put into operation by a small stream of surface water, which, falling into a box attached to a lever-beam, is brought down with such force as to be sufficient to displace the bottom, working on a hinge, by which the water escapes; the lever-beam then rises, being operated upon by a weight attached to the opposite end, and the process of filling the box commences afresh, with the stream which is ever flowing. I could not but admire the simplicity of the contrivance, which, although by no means a modern invention, might be made subservient to many

modern purposes of utility; for there you have the *motive* power, which by suitable machinery might be applied horizontally or vertically, and to considerable extent. Two or three of these machines, working alternately, would give a *continuous* motion, and might be made to reel silk or cotton, or even blow a blast to a *smelting furnace*. The force of that of which I am now speaking, exerts a power of three hundred pounds.

But my intention was to recommend, for the fabrication of all wood-work situated below the water, for this and other like purposes, the *beech*, as far more lasting than white oak, which is, I think, generally selected for this purpose. I have known it placed in the bottom of sluices and mill-ponds, as pipes and trunks, where it has remained for very many years undecayed; and I have seen it taken up for examination, and returned as sound as when first placed. I believe it is generally known that the beech tree is to be found growing near springs, and often with its roots submerged in the water, flourishing greatly.

SUBSCRIBER.

Speech by Dr. Hirzel,

Before the first Agricultural Meeting in Switzerland, 1763.

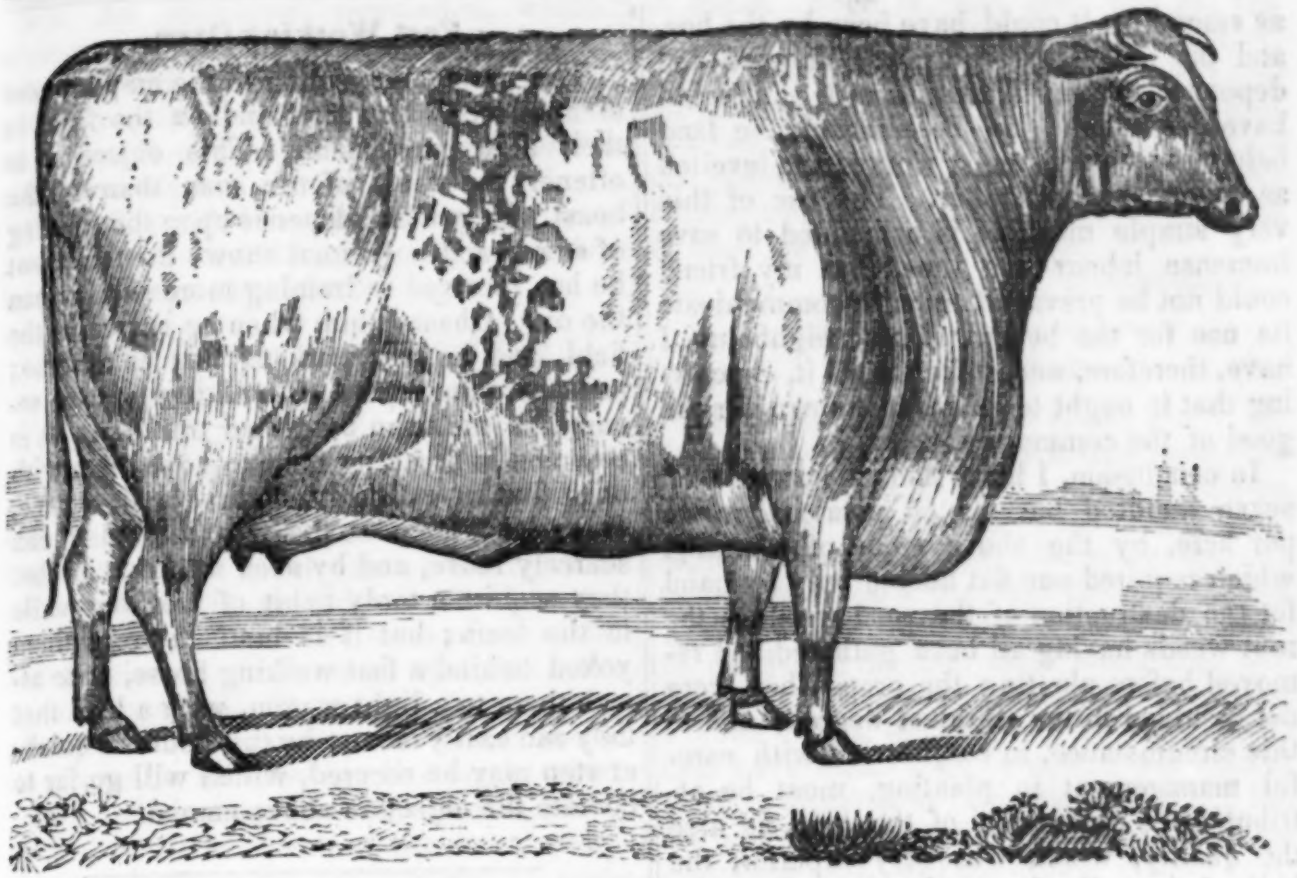
I have never in my life experienced a satisfaction equal to what I am sensible of at this agreeable moment, when I behold men of worth in the city and the country unite their common endeavours for the public benefit; and you, my friends from the country, must now be convinced that all our views centre in the discovery of such methods as may tend to augment the prosperity of our republic, by giving fresh vigour to the industry and activity of our labours, and endeavouring to instruct in the most certain rules for cultivating and improving the fertility of the soil. We have intelligence from all parts of the globe, from men of talents most likely to instruct us by their experience, and those of us whose circumstances will allow it, in order to be more sure, confirm this by trials of their own. I see we are all animated with the same zeal, and I expect the most happy effects to result from it for the general good of our beloved country; and, in fact, it is on *you*, my country friends, on whom the success of all our inquiries depends; all *speculation* will be fruitless, unless you perform your parts; it depends on your endeavours to render this a happy and a flourishing country, and your virtues, your candour, are a sure guarantee of your acquiescence; and you will then have earned the glorious title of benefactors to your country; you will then demonstrate that the occupation of the husbandman is, in its consequences, the most important and honourable of all that are exercised in civil society, and at the same time the most agreeable and satisfactory to fulfil; for what can be more pleasing than a perpetual contemplation of the works of the Creator, while breathing the pure air, and confirming the health of the body by exercise and labour, and beholding a happy fertility, the reward of care and diligence! What employment can be more easy to fulfil than that *where the greatest part of the success depends upon a man's own conduct?* and how unfortunate in this respect are *those* who spend much time and care to render their ideas acceptable to others; and what a number of efforts must be made and obstacles surmounted before *we* can introduce them into practice, or reap the least advantage from our exertions! Continue then, my excellent friends, to second us with all your might; give us your confidence and friendship, and you shall see us, in our turn, do every thing in our power to convince you of our sincere regard, and to render of general use the maxims which we have learned from books, from experiments, and from your conversation; and may this union of interests procure for our country all those blessings which there is reason to expect from it.

Pickle, or Brine.

Salt water is much heavier than fresh, and as brine is always weakest at the upper part of the vessel or cask that contains it, in order to keep it of an uniform saturation, a wooden lattice-work frame, of such size as to be easily let into the inside of the reservoir, is sunk an inch or two under the surface of the brine, for the purpose of suspending upon it lumps of one or two pounds, or larger, of solid salt, which effectually saturate the upper strata of the pickle, and thus the brine will be continued of the utmost strength so long as any part of the lumps remain undissolved.

"Manure is the capital on which farmers do business; and the man who teaches them how to obtain it at a reasonable rate, and in sufficient quantities, does the public better service than if he lectured the live-long day on copper and silver mines, and amused the sleepy hours with golden dreams."

If a man doubles the number of his acres, and employs only the same number of hands upon it as when he had only the half of it, his profits will be less than they were when he had half the quantity of land.



JESSICA,

Three and a half years old. Bred by J. Hutchinson, Esq.

To the Editor of the Farmers' Cabinet.

Potatoe Planting.

Sir,—On a late visit, which I paid to an intelligent friend and excellent agriculturist, I found him in his field planting potatoes, after a method which I consider about as near perfection as may be desired; and the simplicity and ease with which it might be adopted for general culture are, to me, amongst its greatest recommendations. I speak with confidence when I recommend this mode of practice, for I have used it very extensively myself, and have found it the quickest as well as the least expensive, the easiest as well as the most certain mode of procedure, which I have tried or seen adopted. The only difference between my friend's management and that of my own was, he planted under a turf sod, with once ploughing, while I always plough the land designed for potatoes early in the autumn, deep, and well up, and so it lies until the spring: the after culture, and before I plant my crop, leaves me but little to do in the way of cleaning and hoeing amongst the crop, it being my plan to completely eradicate the weeds and pulverise the soil, before planting the potatoes, when double the labour in half the time, and at half the expense, can be given for the purpose.

His method after this was like my own—the surface of the land had been spread with half-fermented manure, and in a furrow which had been thrown out adjoining the fence, potatoe sets were dropped, at the distance of fourteen inches apart, and upon these the dung of the two next furrows in width was raked and spread carefully; the plough, on again passing, turning a furrow upon it and the sets, and making as good work as I ever expect to see. The next furrow had no potatoes planted in it, and no dung, so the sets were planted in every alternate furrow, and these had the whole of the dung: thus the work was finished in the easiest, quickest, and most perfect manner imaginable.

Now, in all other sod-ploughings for planting, I have been dissatisfied with the rough and uneven state in which the land had been left after the plough, and on which the harrows would operate to much disadvantage, and often to an injurious extent, pulling over the half-turned sods, which would require to be replaced by hand, and even then the work would be left ill done. My friend had, I believe I may say, *invented* a machine by which this inconvenience and injury were prevented, and for this, if it be his own invention, he deserves a premium—it was merely the iron tire of a broad wagon wheel, which was dragged horizontally on the surface of the ground by a longer or shorter chain, so as to elevate the front to a certain degree to enable it to work properly; and by this very simple contrivance, the surface was cut

as smooth as it could have been by the hoe, and the pulverized earth was dragged and deposited in the hollows, as well as it could have been done by the shovel; the land being thus as effectually worked and levelled as by harrow and roller. The use of this very simple machine is calculated to save immense labour and time; but my friend could not be prevailed upon to communicate its use for the benefit of his neighbours, I have, therefore, undertaken to do it, conceiving that it ought to be made known for the good of the community.

In conclusion, I have known upwards of seven hundred bushels of potatoes grown per acre, by the above mode of planting, which required one flat hoeing only by hand for the destruction of the seed weeds — the root weeds having all been gathered and removed before planting the crop—they were not moulded in the slightest degree; and to this circumstance, in conjunction with careful management in planting, must be attributed the great yield of the crop, as also the quality, which was very superior, the bulbs being all of a good size, and not deformed by those knobs which are so common on those that have been raised by repeated mouldings—would our friends think on these things?

A Subscriber.

Right Method of Farming.

A farmer by the name of Thomas Oliver, residing five or six miles from Edinburgh, leased a farm for the last twenty years of one hundred and fifty acres, paying annually a rent of ten guineas per acre, (seven thousand five hundred dollars per annum,) on which he raised grain, hay, and vegetables, for the market of Edinburgh; this lease he has recently renewed for nineteen years, on the same terms; and from a poor man, he has become independent in his circumstances, and now rides in his carriage! What American farmer could make a profit that would enable him to pay such an enormous rent? All may be accounted for on the principles of judicious cropping, heavy manuring, and careful cultivation.

The annual meeting of the English Agricultural Society will be held in Cambridge, the present month, and great preparations are making to accommodate the numerous assemblage that is expected to be present: the dining-room built for the purpose, will be 197 feet long and 113 feet wide, and will accommodate 2500 persons. The premiums offered for the present year amount to $5000; the annual income of the Society is $14,000; the total number of subscribers 2172.

Fast Working Oxen.

The greatest objection to the employment of oxen upon the road and on the farm is their slow movement. This objection is oftener the fault of the man than of the beast. Very much depends upon the training of steers, and no animal shows the treatment he has received in training more surely than the ox. Observe him when he is free in the field, and he will walk as fast as a horse; and the same speed of walking may be secured in the team by proper training. It is common in breaking them to yoke them with oxen that have already acquired a slow pace, or to load them so heavily that they can scarcely move, and by such means it is that they acquire a tardy habit of working while in the team; but it is better to train them yoked behind a fast walking horse, or to attach them to a light wagon, with a load that they can easily move; by this course a quicker step may be secured, which will go far to obviate the objection above named.

Beet Sugar.

During the last winter a memorial was presented to Congress by Mr. Charles L. Fleischman, on the culture of the sugar beet, which we consider a most valuable and interesting document. We should be glad to publish the whole, but must be content with a few extracts,—"blending the useful with the sweet."

"The beets are now cut in thin slices, dried before any fermentation can take place, ground to fine powder, so that all cells are broken apart, and mixed with water, which dissolves the sugar before the mucilage begins to swell. .The pure uncoloured liquor obtained is evaporated, and the syrup brought into moulds to crystallize.

The general argument against the introduction of this branch of industry, that labour is too high in the United States, is incorrect, when we consider the other advantages which the United States have over every other country on the globe in almost every business, and especially in this branch of industry:

1st. The United States possess a climate which suits the beets better than the climate of Europe, because the summers are excessively warm, which increases the saccharine quality of the beet root.

2d. Plenty of cheap and rich land, subject to but a small tax.

3d. Inexhaustible stores of fuel, from which the great natural water-courses, railroads and canals, branch over the whole Union.

4th. Well-constructed labour-saving machines of all descriptions.

5th. An intelligent population, which, when once acquainted with this branch of industry, will soon bring it to great perfection; a population understanding the use and management of machinery, and famous for improvements and inventions.

The following shows the amount of money paid by the United States, during a specified time, to foreign countries for sugar:

In the year 1832	$2,933,683
1833	4,752,348
1834	5,537,829
1835	6,806,184
1836	12,514,551

By the adoption of this new branch of industry, the sums at present paid for importing sugar would be, in short, a clear gain to the country: its agriculture would be improved, and thousands of acres of exhausted and deteriorated land would again be taken up and improved. To procure the necessary manure for this purpose, the farmer would be obliged to increase his live stock, which would find, during the winter season, plenty of food in the residuum of the manufactory. It would increase the consumption of sugar among the less wealthy class, and would make their condition of life more comfortable, and, of consequence, greatly extend the population of the country.

An acre of good cultivated land yields, on an average, twenty tons of the beet root.—Beets were sold this fall, near Boston, for $5 per ton.

One ton of beets yielded, when treated after the new method, 180 lbs. of *white refined sugar*. The cost of manufacturing a ton of beets into sugar would be, at a very high estimate, $6. One hundred and eighty pounds of refined beet sugar would cost $11, or $6\frac{1}{18}$ cents per pound, for which we now pay, at the lowest rate, 15 cents."—*American Farmer*.

Power of Machinery.

It is calculated that two hundred human arms with machines now manufacture as much cotton as twenty millions of arms were able to manufacture without machines, forty years ago. It is further calculated, that the quantity of manufactures of all sorts, at present produced by British workmen, with the aid of machines, is so great, that it would require, without that aid, *four hundred millions of workmen!*

Agriculture.

Agriculture is the most certain source of domestic riches and true liberty; where it is neglected, whatever wealth may be imported from abroad, poverty and misery will abound at home. Such is, and ever will be, the fluctuating state of trade and manufacture, that thousands of people may be in full employment to-day, and in beggary to-morrow: this can never happen to those who cultivate the ground—they can eat the fruits of their labour, and can always, by industry, obtain at least the necessaries of life.

HOLINSHEAD.

Deep Ploughing.

The success of one half of any one of his fields, under a regular deep tillage, compared with the other half, under a shallow tillage, will be the best and most convincing argument in favour of deep ploughing that can be laid before the practical farmer. Lands which have hitherto been ploughed shallow, on receiving the first deep ploughing, will generally fail, in some measure, in producing a good crop; this has disheartened some that have made trial of it, and has caused them to abandon it immediately again; but the action of the sun and atmosphere on the up-turned clay, will contribute greatly to its fertilization; this being turned down and the former surface brought up again, with the aid of proper manures, will create a deep soil, and render it fertile and productive.—*Franklin Farmer*.

Instructions to Young Mowers.

Every farmer, who has employed many mowers, has had occasion to pity the manner in which some of them "dragged their slow swarths along," while he was delighted with the ease, the rapidity, and smoothness with which others, of far less strength, would pass over the field.

The instructions of a kind and indulgent father, on this subject, are not only fresh in my memory, but have made first-rate mowers of many young men, and perhaps may be useful to some of those who may mow for the first time hereafter. I say for the first time, because very few change a bad habit (of mowing particularly) after it is once acquired. "As the twig is bent, the tree is inclined;" so with those who use the scythe. Therefore, let the boy of fourteen mow one or two hours in each day, during the haying season, for two or three years, when, by the following directions, he may be able to successfully compete with the strong but illy instructed. Let his snathe and scythe be very light, and the scythe of razor-like edge, and so hung, that when suspended on the finger by the lower neb, the point and heel of the scythe may be at equal distances from the ground. When at the edge of the grass, let an old and good mower, (who is to walk

near him half an hour,) instruct him to stand nearly erect, the hips being further advanced than the shoulders, and under no circumstances to stoop, and when inserting his scythe into the grass be sure to keep the heel nigh the ground; and when cutting the clips and after let the point be equally near it; let the body turn with the scythe as on a pivot, the heel of the scythe passing within two or three inches of the advanced foot. This will relieve the arms, and so divide the effort, that he will mow with as little fatigue as he can perform light work, and soon laugh at the "six footer" who stoops to reach his grass.

Let the boy also at first be instructed to clip only ten or twelve inches of grass, until his erect posture and the horizontal position of his scythe become habitual, when his love of ease, his interest, and desire to triumph, will require a long scythe, perfect in temper, yet light, and forming from heel to point the segment of a circle of about seven feet radius.—*Monthly Visitor.* J. W. W.

Effects of Habit on the Infant Mind.

I trust every thing to habit; habit, upon which, in all ages, the lawgiver, as well as the schoolmaster, has mainly placed his reliance; habit, which makes every thing easy, and casts all difficulties upon the deviation from the wonted course. Make sobriety a habit, and intemperance will be hateful and hard; make prudence a habit, and reckless profligacy will be as contrary to the nature of the child grown an adult, as the most atrocious crimes are to any of your lordships. Give a child the habit of sacredly regarding the truth—of carefully respecting the property of others—of scrupulously abstaining from all acts of improvidence which can involve him in distress, and he will just as likely think of rushing into an element in which he cannot breathe, as of lying, or cheating, or stealing.—*Lord Brougham.*

Bad Practice of Farmers.

BY PRESIDENT MADISON.

1. That of cultivating land either naturally poor, or impoverished by cultivation. He attributes this to the effect of "habit," continued after the reason for it had ceased to exist. Whilst there was an abundance of fresh and fertile soil, it was the interest of the cultivator to spread his labour over as great a surface as he could. Land being cheap and labour dear, and the land co-operating powerfully with the labour, it was profitable to draw as much as possible from the land. Labour is now comparatively cheaper and land dearer. Where labour has risen in price fourfold, land has risen tenfold at least.

2. The evil of pressing too hard on the land, has also been much increased by the bad mode of ploughing it. Shallow ploughing, and ploughing up and down hilly land, have, by exposing the loosened soil to be carried off by rains, hastened more than any thing else the waste of its fertility.

3. The neglect of manure is another error. It is traced to the same cause with excessive cropping. In the early stages of cultivation in this country, it was more convenient and more profitable to bring new land into cultivation, than to improve old land. The failure of new land has long called for the improvement of old land; but habit has kept us deaf to the call.

4. Among the best means of aiding the productiveness of the soil is irrigation—a resource which abounds in this to a much greater extent than in any other country.

5. Mr. Madison conceives it a gross error that horses should be used instead of oxen, and his reasoning is pretty conclusive in favour of the ox.

6. Too many neat cattle are kept. As a farm should not be cultivated beyond the point at which it can be kept in good heart, so the stock of cattle should not be kept in greater number than the resources of food can keep in good plight. If a poor farm is unprofitable, so are poor cattle.

7. Of all the errors in our rural economy, none perhaps is so much to be regretted, because none so difficult to be repaired, as the injudicious and excessive destruction of firewood. It seems never to have occurred that the fund was not inexhaustible, and that a crop of trees could not be raised as quick as one of wheat or corn.

To the Editor of the Farmers' Cabinet.

Ploughs and Ploughing.

Sir,—I observe in the last number of the Cabinet, a list of premiums for crops, and am given to understand that there is to be a show of cattle, horses, crops, &c., in the autumn.

Now, I would take the liberty of hinting to the committee on premiums, the extreme interest which would be felt, just at this time of agricultural improvement, if a sum could be devoted to the encouragement of *ploughs and ploughing*. The almost numberless varieties of the "very best ploughs" seem to call for the public test of experiment to place their merits in a proper point of view, so that practical men may have an opportunity to judge, by *sight* and *feeling*,

which is most deserving the public approbation; and thus too, would be given an opportunity to show the vast difference which there is between good and bad ploughing—a business of more importance than almost any one can imagine—for to this first of operations is to be attributed, I have no doubt, much of the uncertainty and discrepancy which we observe in the accounts of the management of crops, even from the commencement of their cultivation. I dare say we have good ploughmen among us, but I have an idea that in this operation we are more deficient than in any other of our field labours; and should the committee think proper to offer a premium for the best ploughing, I would suggest the propriety of confining it to the *quality*, and not to the *quantity*, of work completed within a given time. In other countries it may be well to encourage the quick step, but here, I am mistaken if almost all our labours in the field are not too hastily performed, little regard being paid to the *manner*, if it be only done quickly; but in none of our operations is such haste to be deprecated as in that of ploughing—the foundation of all good and all bad husbandry.

I am led to the subject at this time by seeing in the papers that the Philadelphia Agricultural Society, or rather a committee appointed by them, intend to report on the merits of Prouty's plough, which has, I believe, been tried and approved by them. Now, there is a plough known by the name of Ruggles, and sold at the Store No. 398 in Market Street, Philadelphia, which is so like the one known as Prouty's, and is spoken of so highly by the maker and vender, that I think it would be well if their merits could be tested, side by side, by actual experiment, that so a correct estimate might be formed, under the sanction of the Agricultural Society, for the satisfaction of the agricultural community. I observe that the peculiar feature of both these ploughs is precisely the same—known by the term *centre draft*; and it would be curious to ascertain whether the patent right of one has not been infringed by the other. I understand the inventors of both desire nothing more than a fair opportunity to jndge by experiment the real merits of their inventions. Other ploughs there are, claiming the title of *the best*, and the committee would have it in their power to add much to the interest of the day of exhibition, and confer an obligation on their numerous agricultural friends, by granting premiums for ploughs and ploughing. J. E. C.

There is something within us, when we hear the truth, that says *yes* to it, however disagreeable it might be.

To the Editor of the Farmers' Cabinet.

Blight.

Sir,—In the last number of the Cabinet, article "Rust or black Blight in Wheat," it is said, "where is the farmer or shepherd who does not know that flesh-flies will not deposit their eggs on a healthy part of a sheep, or if they do, that they will not produce maggots." Now, we may observe an exemplification of this law of nature in those linden trees in Arch Street, Philadelphia, (so lately preyed upon by millions of caterpillars, but which have so suddenly recovered their foliage, the vermin having been cleared away by a genial shower and change of temperature;) there we find the white moths * busily depositing their eggs in the bark of those trees that are *diseased*, but not in the *healthy* ones. And yet, it does not follow that these individual trees will again be infected the next year with the same disease, and again be covered with caterpillars; else they ought always to be so affected, for there are the seeds of the animaculæ already deposited—it depends, however, on the state of the atmosphere the next year, whether they will then be brought into existence; and I cannot but point to those trees of the same description growing in Chesnut Street, opposite the State House, which I observed, the last time I visited the city, to be free from blight, although they suffered so much the last year by this disease; their present state of security has been gained, I have no doubt, by the change of soil about their roots, which *manuring* was given them last year, and by which they have been so strengthened as to be enabled to throw off the atmospherical attack, which prostrated those in Arch Street.

In the number of the Cabinet for May, article *Blight*, there is a passage so illustrative of this view of the subject, that I must quote it: I consider the theory there advocated, although before new to me, true to the *spirit*, simplifying and rendering this process of nature so clearly evident, that it demands our very serious attention and examination: it would indeed appear that the *effect* has been mistaken for the *cause*. Speaking of the blight in wheat, the author says—"the disease, originally caused by atmospheric affection, depends entirely on the subsequent state of the weather for its increase, decrease, or annihilation; nor are the seeds of the supposed parasite of the smallest future consequence, since we invariably find that, whether the vegetation of the succeeding year shall be blighted or not, depends

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* Are we quite sure that these white moths were produced by the caterpillars? who saw these caterpillars in their *crysalis* state? J. D.

simply on the course of the winds and the condition of the atmosphere; and that whatever store of the seeds of the parasite may be supposed to remain after the most blighting season, they are still found perfectly harmless in warm and genial seasons; and after the interval of a number of years of exemption from the malady, one shall suddenly occur, in which the disease shall be epidemic, and its cause *an atmosphere unfavourably changeable*, so obvious, that if a blind man cannot *see*, he shall be sure to *feel* it. In the mean time, what betides the seed of Fontena's favourite parasite plant? does it remain floating in the *air*, buried in the earth *beneath*, or in the waters *under* the earth? partially holding itself in readiness to obey the summons of that boisterous Æolus *east-north-east*, and to nestle in the body, now prepared for its reception, in order to suck up its life-blood!" J. D.

Pottsville.

Root Crops.

By the cultivation of roots, the soil becomes finely pulverized and cleansed of weeds; and as a large surface of leaves is presented to the atmosphere, they imbibe the rich gases, and obtain from the air the principal nutriment for the crop. In this way, a large crop is raised without injury to the soil, *and that crop is converted into manure*, which, again applied to the soil, enriches it more than the produce from any other crop. So, as the root crop *takes less* from the soil, and returns *more* than any other, the advantages to be obtained by such culture are of infinite importance to the farmer. And as root crops are increased, the means of keeping stock are increased, and of course the quantity of manure is also increased; so the root crops and manure increase each other, with a correspondent increase and profit in the stock and improvements in the farm, until the profit and value of all is quadrupled; and this is no false theory, but sober calculation, founded upon facts.—*American Farmer.*

To the Editor of the Farmers' Cabinet.

Highlands Farm.

Sir,—I have had the pleasure to spend a day at this noble establishment, belonging to George Sheaff, Esq., of Whitemarsh, Montgomery County, Pennsylvania, and have been exceedingly gratified with the style and neatness in which every thing around it has been planned, executed, and, what is of still more importance, sustained. The house and offices, the gardens and pleasure grounds, are "beautiful to look upon;" but to an agriculturist, the farm, consisting of three hundred and twenty acres of land, with its three enormous barns, elegant cattle-stalls, stables, granaries, well-planned yards for foddering cattle, and securing the washings of the manure, and large quantities of manure from last winter's feeding, turned up and covered with earth to prevent the evaporation and dissipation of the gaseous substances, and large compost heaps with earth and lime intermixed; with tool and implement houses—"a place for every thing, and every thing in its place,"—all this is of far more importance, and greater interest. The large enclosures, thirty and forty acres each, with living springs of water in almost every one, and crops of uniform appearance, straight fences of substantial post and rail, with not a weed to be had *for love or money*—these things have been to me a source of the highest gratification. And all has been *created* on a soil, by nature not fruitful, by the present proprietor; and is evidence how much can be accomplished by talent, perseverance, and capital well employed; its healthy subsoil, however, and particularly airy and delightful situation, contributing, I am convinced, in a great degree, to the facility with which, in the space of fourteen years, the estate has been clothed in magnificence and grandeur, and rescued from a state of comparative sterility and barrenness, the former proprietor having been compelled to purchase hay for his horses; while the present intelligent cultivator, the son of the present proprietor, *contrives* to fatten about one hundred oxen a year, and to sell large quantities of hay in Philadelphia. It may be denominated a model farm; I have seen many such *upon paper*, but, if it be not invidious, never before in reality one other such in this country. Here is breadth and depth, and space for action; and a visit to it must, to every practical man, be attended with lasting benefit.

I do not, however, consider the land well adapted to the feeding of cattle, it is not deep enough for that purpose; not that beef cannot be made with hay and corn, but to those who have witnessed the deep fatting meadows in various parts of England, some of which are at Willersley's Gate, on the road to Hereford, within a few miles of the town of Hay, with which many of your readers might be acquainted—and upon which it is said that three sets of oxen are fatted in the course of one summer; and the enormous yield of the adjoining arable lands for winter stalling; to such persons, the lands at the Highlands farm will appear more suitable to the rearing and feeding of sheep, a purpose for which, indeed, it is peculiarly adapted. The herbage is naturally short and sweet, the sub-soil dry and healthy; and

although it is believed by many that sheep, by eating the grass too close, destroy the roots of the crop, the direct reverse is the fact, for the turf will astonishingly improve under their feet, and become enriched by their manure, which, as has been said by some one, is not only thus *carried abroad*, but *spread* for you free of expense; and this thickening of the turf will prevent the manure from passing away through the open sub-soil.

But the largest breeds of sheep ought to be obtained, and the course of raising and fattening for the market, be pursued as a regular system; while for sheep of twenty pounds per quarter, well fed, a price could be obtained at Philadelphia or New York, which would, I conceive, pay a greater profit than cattle; the lambs and wool being also taken into the account—and for this purpose, my favourite breed of sheep, one cross between the Leicester and South Down, would be peculiarly well adapted.

I saw here a hog, a cross between the Berkshire and the Chester-County breed, which was about as near my idea of *usefulness* as need be; and I would recommend very strongly the Chester breed, for I have seen many individuals in that county that required no *crossing*, for I think, with hogs, a man might soon get too much of it.

I feel pleasure in the hope of spending a few hours at the Highlands farm after the grain harvest: that is the time to estimate a man's system of farming—the stubbles will then show that, most unequivocally.

I once knew a young and most intelligent farmer who, whenever leisure served, went abroad to visit the farms, and witness the management pursued in distant parts, and he considered the money so expended the best investment of capital; "for," said he, "if I see any system better than my own, I quietly adopt it; or if, on the contrary, I find my own superior, I am the more surely convinced and satisfied, and am strengthened in my good opinion of it—either way I am benefited, and never return to my home without feeling a fresh stimulus to action; and better pleased with my own situation, treasuring up many facts and opinions for adoption or experiment, which soon amount to the value of my rent." No one can easily calculate the benefit of such a course; and if it were practised in this country, its effects would soon be visible on every side—I do not think the weeds would continue to grow so tall and stout as they now do in many places; nor should we see the washings of the dung from almost every farm-yard in the country, passing away over the roads and into the ditches, to the robbery of about fifty per cent. of its value: as soon as it becomes the practice for farmers to *think* as well as to *act*, this is one of the first evils that they will set about to remedy.

VIR.

To the Editor of the Farmers' Cabinet.

On Rolling Crops.

Sir,—A practical writer in the "New England Farmer" says, "when I am ready to sow my corn, I turn under the sward, and roll it down with a heavy roller; and this rolling I consider indispensable. I planted a field of fourteen acres the last year; we had finished and rolled down nearly half the piece, when my brother, who owned half the roller, and resided about a mile from me, began planting his corn, and we therefore concluded to dispense with the roller, and finish the field with the harrow; and it is a fact, that the part of the field which was rolled was not so good land as that part which was harrowed, the manure being, however, the same. The part which was rolled, after being cleaned, got the start of the harrowed part, and many will testify, that on the first day of July, the corn where the land was rolled was one-quarter heavier, and so it continued through the season until the harvest."

This is a remarkable instance of the value of the roller; and it reminds me of another, which goes to corroborate the truth of the matter in every particular. I was spending the day at the farm of General Le Couteur, (the father of the present Colonel Le Couteur, so extensively known by his invaluable treatise on wheat,) a perfect Cincinnatus, who had retired to his paternal estate, after a long life spent in the service of his country; he was planting the horse-bean in rows, for the purpose of after-culture with the hoe; the land was rather stiff, and yet, he was finishing by rolling, after it had received a thorough harrowing upon the seed. I prevailed upon him to leave a portion of the field unrolled, convinced, as I assured him, that he would find the land to hoe easier, and the crop on it to be heavier at harvest; but how was I mortified to find that my unrolled crop was *minus*, at harvest, about one half, after having shown a deficiency in growth through the whole summer!

Few persons in our country are aware of the value of the roller, because, and a sufficient reason it is, not one farmer in twenty possesses one; and I have known some of those who have one never to use it—an unpardonable neglect on any land, but particularly on light and porous soils.

An author very justly observes, "the rolling in of seeds after sowing is too often neglected, although very necessary under

almost all circumstances. Most seeds are comparatively small, and when they are sown on a pulverized soil, it frequently happens that many of them are not in close enough contact with the earth to be kept moist, and excluded from the light; consequently, they will not vegetate freely, if at all; and these young plants, if any come up, easily dry and perish." And every one who has sown seeds in beds in a garden, must have observed that those which have fallen on the walks between the beds, have vegetated first, and made the strongest plants—a roller on a farm is as indispensable to good tillage as a plough.

A Subscriber.

To the Editor of the Farmers' Cabinet.

Who shall decide?

Sir,—I remark an article in the New England Farmer "on Connecticut River Farming," over the signature of Z. Stebbins, "a practical and successful cultivator in a highly improved part of the state in which he resides," in which we are told that the ravages of the cut-worm in the young corn are only to be prevented by late ploughing of the sod in the spring: he says, "the way I manage my corn is, I never plough my green sward until I get ready to plant, for two reasons: first, the grass, by not ploughing until May, will get up, and be almost as good as a coat of manure; and second, the worms will live in this grass, and it will thereby prevent a great deal of damage which they frequently do; I have, therefore, entirely done ploughing sward land in the autumn, for I am satisfied it is a bad practice." And I myself remarked in a large field the present season, where the cut-worm had done infinite damage in the best-cultivated parts, rendering it necessary to re-plant for the third time; while at one end of the piece was about an acre of land, with the turf but partially turned, in consequence of the rocky nature of the soil, which prevented the plough from penetrating, and where the corn had escaped the ravages of the cut-worm,* and was growing luxuriantly; and to this spot the owner directed my attention in proof of the doctrine, that "the worms will live on this newly-turned sod, by which their attention will be drawn away from the corn, until it be out of the reach of their depredations."

And yet, we are told, at page 355 of the Cabinet for June, that a practical farmer admitted, that the cure for the cut-worm in the spring was an autumnal ploughing! On mentioning this difficulty to an advocate for autumnal ploughing, he replied, "the first of the above reasons is the *reasoning* of an indolent manager; I never depend upon a growth of rubbish on my land to replenish the soil, I have manure sufficient for the purpose, and do not need it: the second reason may be necessary for one who is willing to keep and feed a race of cut-worms, and every other species of depredators of the crops about him, and such a person may feel himself bound to furnish them with food in the winter and spring; but to me, who will not permit them to breed and feed upon me, such provision is unnecessary. I turn them up in the autumn to be operated upon—both eggs and vermin turned topsy-turvy—by the rains, frosts and snows of winter;* and after they are destroyed, and the land has been properly cleaned and pulverized by spring tillage, the sods also being thoroughly decomposed, and turned into fit food for the plant, *then I sow my corn.* To many, autumnal ploughing is a subject on which they are deplorably ignorant; the way in which it is performed, and the period to which it is delayed, are sufficient of themselves to bring the thing into disrepute—plough early after harvest, deep and in small furrows, laying the land high and dry that it might drain off the surface water during the winter, and trust to the event. I should not like to turn cut-worm feeder." A. R.

Industry.

None have a right to expect a benediction from heaven, but those whose probity is irreproachable, and their industry indefatigable, and who thus earn their bread by the sweat of their brows. Our lands want only to be cultivated with more understanding and industry, to supply a sufficient quantity of produce for all our wants.

When you have meditated well upon any objects of real utility, propose them with energy, and execute them with fervour and activity, and the blessing of Providence will not be wanting.

The productions of the earth will always be in proportion to the culture bestowed upon it.

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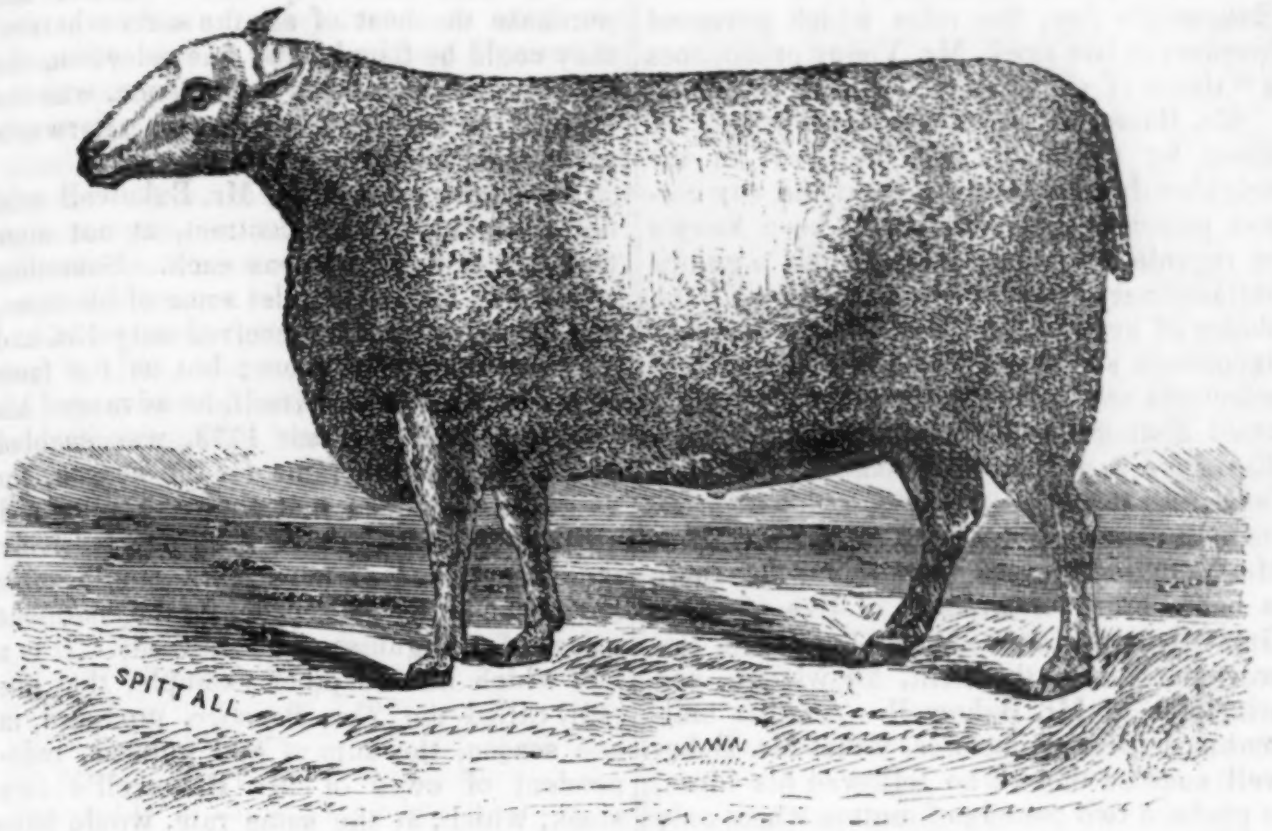
* It is easy to imagine the cause of the cut-worm not being found in the dry and stony part of this field—the eggs of the cut-worm are deposited by the female in the dung dropped by the cattle while feeding on the sod, burrowing the earth for the purpose; but they would be *very short* indeed, if they did not know how much easier it is to burrow in the deep and soft parts of the field, than on the rocky and dry soil: perhaps too they know that the moist soil would be more congenial to the growth of their progeny, than the hard, dry and rocky land.

* See a most interesting paper on this subject in the Cabinet, Vol. 3, page 286, by Agricola.



THE DISHLEY, OR BAKEWELL RAM.

His head should be fine and small, his nostrils wide and expanded, his eyes prominent and rather bold and daring; ears thin, his collar full from his breast and shoulders, but tapering gradually all the way to where the head and neck join, which should be very fine and graceful, being perfectly free from any coarse skin hanging down. The shoulders broad and full, which must, at the same time, join so easily to the collar forward, and chine backward, as to leave not the least hollow in either place. The mutton upon his arm, or fore-thigh, must come quite to the knee; his legs upright, with a clean, fine bone, being equally clear from superfluous skin and coarse hairy wool, from the knee and hough downwards. The breast broad and well forward, which will keep his fore-legs at a proper wideness; his girth, or chest, full and deep, and instead of a hollow behind his shoulders, that part, by some called the fore-flank, should be quite full; the back and loins broad, flat, and straight, from which the ribs must rise with a fine circular arch; his belly straight, the quarters long and full, with the mutton quite down to the hough, which should neither stand in or out; his twist* deep, wide and full, which, with the broad breast, will keep his four legs open and upright; the whole body covered with a thin pelt, and that with fine, bright and soft wool.

The nearer any breed of sheep comes up to the above description, the nearer they approach towards excellence of form; and there is little doubt but, if the same attention and pains were taken to improve any particular breed, that has been taken with a certain variety of the Lincolnshire, the same consequences would be obtained. The variety here meant, is that which was first selected by Mr. Bakewell, of Dishley, who, with singular discernment and great attention, has raised a breed of sheep, unknown in any former period, and which surpass all other breeds in their propensity to get fat, and in paying the most money for the quantity of food consumed. The weight of the carcass of this fine breed is generally—ewes, three or four years old, from eighteen to twenty-six pounds per quarter; wethers, two years old, from twenty to thirty pounds per quarter. The wool, on an average, eight pounds per fleece; the length of the wool, from six to fourteen inches. CULLEY.

* Twist—the junction of the inside of the thighs.

Robert Bakewell, of Dishley.

This gentleman, as the improver of live stock, on principles peculiarly his own, will descend to posterity as a distinguished patron of agriculture. "The principles he began upon (says the celebrated Arthur Young) were *fine forms*, *small bones*, and a *true disposition to make readily fat*, which is indeed inseparable from small bones, and fine forms,

and true symmetry of the parts." Before Bakewell's day, the rules which governed breeders of live stock, Mr. Young pronounces a "tissue of absurdities."

Mr. Bakewell began his improvement of sheep by selecting from the best in the neighbourhood. And so little had any correct principle of improvement been known or regarded, that a guinea or half a guinea extraordinary would give Mr. Bakewell the choice of any sheep of any flock. And his uncommon sagacity enabled him, by the best selections and judicious crossings, to form a breed distinguished above all others for the *disposition to fatten, early maturity, a form indicating strength of constitution, weight in the most valuable parts*, with *lightness of offal.* Mr. Young expresses his opinion, that there is not a breed of any sort of live stock in Great Britain, that does not derive its improvement from the skill, knowledge, and principles of Mr. Bakewell. Another eminent agriculturist declares, "that Mr. Bakewell enabled those who followed his ideas, to produce two pounds of mutton where only one was produced before."

Mr. Young adds, that Bakewell was the most careful feeder of stock that he ever met with, and who made his food go farthest. To horses and cattle in stalls, he did not permit more than a handful of hay to be given at a time; and the same economy was used in all other feeding. But his stocks were so large as to require one or more persons to be appropriated to that service. This practice on our small farms, and with our small stocks, cannot be fully adopted; but it may be imitated, in some degree, during the season (winter) most requiring such attention. By feeding them in this manner, the cattle will doubtless *eat more*, but they will *waste less*; so that while, in the whole, no more fodder will be consumed, the stock will be put into much better plight.

He was the most successful and celebrated experimental farmer ever known in England. He was born at Dishley, in Leicestershire, about the year 1725 or 6. His grandfather and father had resided on the same estate since the beginning of the present century; and his father, who died about the year 1762, had always the reputation of being one of the most ingenious and able farmers of his neighbourhood.

Mr. Bakewell, having conducted the Dishley farm several years before the decease of his father, began, about forty years since, that course of experiments which had procured him such extensive fame. He then made excursions into different parts of England, to inspect the various breeds, and to ascertain those which were best adapted to his purposes, and the most valuable of their kinds. His next step was to select and purchase the best of all the sorts wherever they could be found; and this selection, the result of several years' experience, was the original stock from which he afterwards propagated his own.

About the year 1770, Mr. Bakewell sold his sheep by private contract, at not more than two or three guineas each. Sometime afterwards he began to let some of his rams, and for a few seasons received only 15*s.* and a guinea apiece for them; but as the fame of his breed extended itself, he advanced his prices, and by the year 1773, was enabled to let some of his rams for the season, for 25 guineas. Since that time the price and credit of his stock have been progressively increasing; and of late years single rams have been let for the season, for the enormous prices of 100 guineas and upwards. It is a fact which has no other example, that one ram, called the *Two Pounder*, produced, in one season, the sum of 800 guineas, independent of ewes of Mr. Bakewell's own stock, which, at the same rate, would have made a total, the produce of one single ram, of 1200 guineas!

The race of Dishley sheep are known by the fineness of their bones and flesh, the lightness of their offal, the disposition to quietness, and, consequently to mature and fatten with less food than other sheep of equal weight and value. Mr. Bakewell improved his black horses by an attention to the form, which is best adapted to their use. His stallions have been let out for the season for 100 guineas and upwards. About ten years since, he exhibited his famous black horse to the king, and many of the nobility, in the court-yard of St. James's.

In this place it may be worth while to insert the following statement of the prices given at an auction for stock, bred from Mr. Bakewell's.

The sale which we advert to, was that of Mr. Fowler, of Rollright, in Oxfordshire. After his death, one article of live stock, the horned cattle, sold for a value equal to that of the fee simple of his farm! Fifteen head alone of bulls and cows sold for 2460*l.*, or at the rate of 164*l.* each!

Mr. B. at the time of his death, was verging on his 70th year. In person he was tall, broad set, and in his latter years, rather inclined to corpulency: his countenance bespoke intelligence, activity, and a high degree of benevolence. His manners were frank and pleasing, and well calculated to maintain the extensive popularity he had acquired. His domestic arrangements at Dishley were formed on a scale of hospitality to strangers, that gained him universal esteem. Of the numerous visitants induced

by curiosity to call at his house, none ever left it without having reason to extol the liberality of its owner. Many interesting anecdotes are related of his humanity towards the various orders of animals. He continually deprecated the atrocious barbarities practised by butchers and drovers; showing by examples on his own farm, the most pleasing instances of docility in the animals under his care.

He departed this life on Thursday, October 1, 1795, after a tedious illness, which he bore with the philosophical fortitude that ever distinguished his character.

To the Editor of the Farmers' Cabinet.

Hessian Fly.

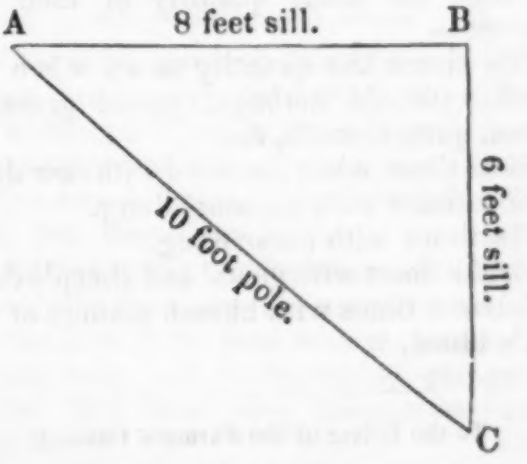
Sir,—It appears by the papers, that where the street-manure from the city of Philadelphia has been used as a dressing for wheat, the Hessian fly has not made its appearance the present year; and that experiments have been made to show, that when used by the side of the common farm-manure, it has always operated as an antidote to its ravages, while the disease has been uniformly found in crops raised by *long muck*. The writer in the Philadelphia Courier says, that farmers, having made these experiments, are of opinion that the preventive properties are contained in the anthracite ashes, with which the city street-manure abounds. Now, I am not one of those, but I believe, that until we alter our course of crops, and mode of manuring with *unfermented* dung, we shall continue to have our fields covered with blight, in every variety of appearance, fly, mildew, rust, smut, &c., whenever the atmospheric changes from cold to heat, and heat to cold, fall upon us, as they have done the present season. Our crops by such manuring are rendered weak and flashy; and our lands, made light and spongy, are very apt to be operated upon by the frosts of winter, to a ruinous extent. How is it, that every farmer does not *know* that wheat requires a close, compact seed-bed, and tenacious, yet healthy sub-soil? But they most assuredly *all know* that they are doing what in their power lies to overturn this order of things, and render their wheat tilths as light and spongy as possible, by fallowing after oats, and dunging and liming that fallow! No need of wonder, after doing so much to foster premature growth, that the crops should suffer by cold blasts in the spring, and be filled with disease and all kinds of animalculæ in the following summer—more of this hereafter.

AN OLD SUBSCRIBER.

Frugality and industry are handmaids to fortune.

Mechanics.

Every carpenter must know before he erects a house, how to lay off the sills in an exact square. He accordingly measures off eight feet from the end of one sill, and there makes a mark; he then measures off six feet on the sill lying at right angles with the first, and makes another mark; he then lays on his ten foot pole, one end of it squaring with the first mark, and if the other end of it does not exactly meet the second mark, he causes the sill to be moved in or out, until it exactly squares with it. The figure which he thus makes in marking off his sills, and in laying down his ten foot pole, is a right-angled triangle A, B, C, the right angle or square corner being at B.



Now, unless the line A C be ten feet long, when the other two are eight and six respectively, the corner B will not be a square corner, for it is found by mathematicians, that in every right-angled triangle, the longest line — the line opposite to the right angle when squared—is just equal to the squares of the other two, the lines A B and B C. This is the reason why carpenters adopt this rule to lay their sills square—eight squared is sixty-four, and six squared is thirty-six—both together equal to one hundred — ten squared being one hundred — ten times ten. —*Boston Cultivator*.

Lightning Rods.

We beg to call the attention of our correspondent, Publicola, to the highly valuable and interesting paper on this subject, by OBSERVER, at page 73 of the third volume of the Cabinet, where may be found all the observation and experience that may be necessary to form a correct opinion upon this very interesting branch of science. Various have been the instances where buildings have been struck by lightning when guarded by conducting rods, but whether these have been properly constructed is a very interesting question. A valued friend asks, whether the *size* of the rod be of importance to

the safety sought by the erection of the conductor? Much has been said as to its height and position—is any consideration due to its diameter? Our friends would confer a favour if they would communicate instances within their experience, where buildings guarded by conductors have been struck by the electric fluid; they would be highly interesting, and may lead to investigation and important results.

Product from Manures.

Experiments in Germany have led to the following conclusions:

If a given quantity of land, without any manure, yields three times the seed employed, then the same quantity of land will produce—

Five times the quantity sown when manured with old herbage, putrid grass, or leaves, garden stuffs, &c.

Seven times when manured with cow dung.

Nine times with pigeons' dung.

Ten times with horse dung.

Twelve times with goats' and sheep's dung.

Fourteen times with human manure or bullock's blood.

To the Editor of the Farmers' Cabinet.

Clover in Corn.

Sir,—In a late conversation with a first-rate agriculturist, and a member of the state Senate, I found that he is accustomed to sow a full crop of red clover in his corn, at the time of the last cleaning, laying the land as level as possible for this purpose; and he assured me he had always succeeded in obtaining heavy crops, without the least injury to the corn, and which, in its turn, shelters the clover by its shade, and encourages a very rapid growth. Will our friends try it by way of experiment the present season? It is believed that it may be made introductory to a new course of crops, which might relieve the country from that terrible scourge, blight, in all its different varieties, fly, rust, smut, mildew, &c., which is supposed in a great measure attributable to the present mode of cropping and manuring.

D. H.

Philadelphia, June 24, 1840.

An Exhortation.

Our fears are, not that there are not many excellent dairy women in the land, but that the benefits of their knowledge and practice will be lost in the new generation that is springing up. Hundreds and thousands of farmers' daughters leave the homes of their mothers and seek other employments, as if with a distelish of that which may be practically more and more scarce. The occupation is stripped by the demand for young women as instructers of youth, as operatives in factories, as milliners or sewers, shoe-binders or straw-braiders, or in some other mechanical occupation. How short do such as are thus employed come of the qualifications of the virtuous maid who obtains the best part of her education under the roof of her own father, from the instruction of the mother that knows how to do every thing coming within her province as the wife of a thriving farmer—who is entirely at home in all that pertains to the dairy, the economical use and due preparation of articles of food and clothing, and who suffers none of her household to "eat the bread of idleness!"

If not to the rising fair generation, to whom shall we look for the hands that are to supply so important a portion of subsistence as the products of the dairy? The farmer may keep his forty, fifty, or a hundred cows: if there be no help-meet to oversee and lead in the preparation of the milk after it goes to the dairy room—if there be no female to prepare the vessels, none to direct in the straining and setting of the milk, the extrication and disposition of the cream, the churning into butter, the separation of the buttermilk, the clean and perfect salting down—if all this is expected of men, and not of women; how miserably shall we hereafter drop away in the produce of a most profitable and most useful article in the production of the farm at that precise time when there is the most sure encouragement for the farmer to enter upon and persevere in the business of the dairy!—*Visitor.*

Great Yield of Milk.

Mr. James Gowen, of Mount Airy, near Philadelphia, gives, through the Philadelphia Inquirer, the following table of the quantity of milk obtained for one week from his imported cow, *Dairy Maid*, of the short-horned Durham breed. She calved about four months ago. The yield exceeds *eight gallons* a day.

Dairy Maid's yield of milk in one week, from 1st of June till 7th inclusive.

	MORN'G.	NOON.	EV'G.	TOTAL.
June 1st,	12 quarts	8¼	9½	30
2d,	12½	9	10½	32
3d,	13½	9¾	10¾	33¾
4th,	14¼	9¾	10¾	35
5th,	14¼	10	10¼	35
6th,	14¼	10	10¼	34¾
7th,	14¼	9¾	10¾	34¾
			Total,	235¼

Being on an average more than 33½ quarts per day.

To the Editor of the Farmers' Cabinet.

Large and Small Farms.

Sir,—I wish my brother farmers would think very seriously on the advantages to be derived from the system of cultivating no more land than can be well manured. The desire for more land has been the ruin of thousands, who would at this time be well to do, if *their friends* had deprived them of one half the number of acres which they at that time possessed; while the extra labour and anxiety consequent upon a business so spread abroad, are all that many have ever gained, and all that they had a right to expect to obtain. And it would appear to be a fatality to which persons of this sort are subject, or they would surely be able to see *the nose in the middle of their face*—for one is not more plain than the other. If ten acres of land can be made to yield as much as one hundred, merely by concentrating upon it the means of improvement, the labour and care necessary for the cultivation of the one hundred acres, the result must be profit of mind, body, and substance, absolutely astonishing! Now only, for a moment, calculate the difference in labour, in hauling the dung over one hundred acres instead of ten, and after that, the spreading it abroad! then come ten times the ploughing, harrowing, sowing, *with ten times the quantity of seed*, hoe-harrowing, mowing or reaping, and binding and raking, over one hundred acres instead of ten, and extra carrying of crops: and after all this, *ten times the rent to pay*—I declare it appears a species of insanity, this desire for more land.

I have lately seen a farm where all these evils are embodied—of excellent natural fertility, the fields large, and lying on an easy declivity, with every facility for permanent improvement, marl of the richest quality in the middle of the estate, and within three feet of the surface—Now, if the owner of this fine farm of about two hundred acres, would confine his labours to ten acres of the land adjoining his house, and give all the rest to the stock upon the farm, only mowing the weeds, to prevent them from seeding his and his neighbours' land, I believe he would then make a *profit*, while at present he must *make a loss*.

I was told yesterday of a farmer who cultivated one acre of land, which adjoined a field of thirty acres—both were planted with rye; and at harvest a bet was made that the yield of the one acre was equal to that of the thirty acres; this was, however, lost, for the crop of the thirty acres measured exactly *three quarters of a bushel more than that of the one acre:* these fields I have seen this day; and I have also seen another field, where the owner offered to dispose of the crop of rye *for a dollar an acre*, but could get no purchaser at that price!

Now, is it not much better to double the crop than to double the number of acres? but I have land lying before me which would yield five hundred per cent. more than it now does, by extra management.

AN OLD FARMER.

The earth delights in variety, and it is most prudent, therefore, to indulge her, changing the course, and intermixing green with grain crops; the main point being, to grow winter provision adequate to the support of such a stock of cattle as, with their dung will keep the farm in constant good heart.

With many persons there is a prejudice against green crops for cattle: they believe that nothing will pay but corn or grain crops. On walking with one of these, and admiring his fine crop of beets, he said, "'tis all very well, but beets pay no rent, remember.' But let him make a calculation of the profit in cattle-feeding and manure, and compare the condition of the land with the same, after a grain crop—it is by taking things for granted that men keep themselves hoodwinked.

Poor and exhausted lands may be recovered by a course of green and root crops, equally well as by being laid down to grass; and these would pay far better than light crops of corn or grain to those farmers who know how to expend them upon their own premises, and those who do not, stand much in need of information. Lands which will not grow grain enough to pay for harvesting, might soon be reclaimed by these means, and left in fine tilth and condition.

With respect to the proper quantity of seed to be sown, it may perhaps be safely laid down as a rule, that seed must be increased in proportion to the poverty of the soil, from which cause so many kernels always perish for want of nourishment: nor is it to be expected that those which vegetate will ever tiller or spread, as do those on a rich soil, by which the crop is much thickened.

Agriculture feeds us, to a great extent it clothes us, and without it we *could* not have manufactures, and we *should* not have commerce; these all stand together, but they stand together like pillars—the largest in the centre—and that largest is AGRICULTURE.—*Webster.*

For the Farmers' Cabinet.

Making and Curing Hay.

Mr. Editor,—The season has now arrived when the farmer will be required to cut and put away his crops of grain and hay; his fields are to be unladen of their treasures, and his barns to receive the rich stores which a kind providence has given in return for his labour and skill, and it is to be hoped that his toil and care will be rewarded with an ample harvest. As some notions have suggested themselves to me in relation to the making and curing of hay, and as this is the season when they can be made useful, and I have experienced the advantage of their application, I have determined to give them publicity.

In making hay, I have for several years made it a rule not to spread the grass (except when it is quite ripe) upon the day on which it was mown. In cutting, I found the buts of the grass were generally thrown by the scythe so as to be exposed to the air, and the tops were below or covered by the buts or thicker part of the stems; I therefore let it lie until the next day, in order to dry the buts as much as possible before spreading. I then have it carefully turned from the bottom, and spread after the dew is off and the swarth has become well heated from the action of the morning sun. If the weather is unfavourable, the grass is allowed to remain in the swarth, and the tops being still covered and entirely green, the swarth will remain exposed to bad weather for several days without taking damage. I therefore continue to cut in cloudy or even rainy weather, and frequently have a large quantity ready to spread when the weather is favourable. I cut when it rains, and make hay when the sun shines. When the stems of the grass are well wilted and warm from the action of the sun, the tops on being exposed will soon dry—much sooner, as you may suppose, than when the whole is in a green state, in which case, in order to dry the whole mass, it must be subjected to frequent turnings. After spreading, I turn once in the morning, and in the afternoon throw the hay into wind-rows with forks, turning at the same time, and clean up between them with the horse-rake, with which I also clean up after the wagons. I prefer this plan of gathering the hay into wind-rows exclusively with the horse-rake, because it leaves the hay in a looser state for the wind to circulate through it, and is more easily handled when put into heaps or pitched upon the wagons. On the afternoon of the second, or the morning of the third day after cutting, if the weather is fair, my hay is usually fit to be hauled in. In mowing away my hay, I have it kept level, well trodden and well salted. Salt subserves several useful purposes: it prevents the hay from moulding; the hay need not come in so dry from the field as it is required to be when salt is not used. It retains a better colour, and more of the fragrant and delightful aromatic odour, after being thus cured, and is a much more wholesome food for horses and cattle; besides, *I think it adds much to the fructifying principle of the manure.* As a proof of its value for the food of horses, I will state, that two of my horses died suddenly of colic: I thought they had been killed by botts, but upon a careful examination of their intestines, I could not discover a single bott or other worm, and I attributed this to the fact, that they had been constantly fed with salted hay—I have never had a horse to complain of botts since I have used it; and I do not doubt that the general health of my horses and cattle has been much promoted by the generous use of salt amongst them, and that their food is rendered much more pleasant to them by a moderate admixture of it.

In pursuing the method of curing hay which I have above recommended, I have not only saved much labour, but retained and secured all the valuable properties of my hay. As a proof of the superiority of my method, I will state, that a large proportion of my crop has been annually sold in the Philadelphia market for years past. My hay would always find a ready purchaser, no matter how much was in market, and I was always able to obtain for it the highest market price. K.

P. S. No liquor allowed in the field or the barn.

To the Editor of the Farmers' Cabinet.

Berkshire Pigs.

Sir,—If the breeders of stock would call on Mr. Benjamin Cooper, near Camden, N. J., they might convince themselves of the truth of the observation, at page 140 of the 4th volume of the Cabinet, "If Bakewell had commenced with dam the best, instead of sire the best, he would have attained his object in half the time."

Mr. Cooper has a pen of spring pigs, one cross with the Berkshire boar and an English sow of remarkable proportions, which show more blood and far better points, than many whose pedigree might be high and unexceptionable: indeed, it would be difficult to find more beautiful specimens of that valuable and favourite breed, of pure blood. I trust Mr. Cooper will exhibit these splendid pigs of *a single cross*, at the coming Philadelphia Agricultural Society's Cattle

Show; they will speak volumes in favour of a breed of hogs that is doing wonders throughout the country: they could be conveyed in the same vehicle with the thorough-bred Berkshire boar belonging to his son, *Mr. B. W. Cooper, which is, I doubt not, destined to become a favourite with the breeders of this kind of stock. This gentleman is, I understand, expecting to receive a pair of thorough-bred Berkshires from Albany, in addition to his present valuable stock. But I would ask, why gentlemen, determined to possess themselves of pure stock, do not go, *themselves*, any length to select their own? I declare, I would almost as soon think of sending to a friend to select a *wife for me*, as fine stock — no, no, these things a man ought to do for himself.

I wish I could induce your numerous readers to entertain the idea of crossing with *dam the best*. Many attempts were made, during the Merino-mania, to clothe a larger carcase with a finer fleece, but who ever thought of crossing the purest Bakewell ewe with the Merino ram? this, I have no doubt, would have effected the purpose, and given a valuable breed of sheep for general purposes. J. G.

Trenton, N. J.

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Farmer's School Book.
Hoare on the Grape Vine.
Farmer's Library, 3 vols.
Pocket Farrier, Boston Edition.
Darlington's Botany.

The undersigned, a committee appointed to examine Prouty & Mears' patent plough, report, that, in pursuance of their appointment, they met, and saw the plough called Sod B., at work—That they found it to perform well, turning over a furrow in breadth about fourteen inches, and in depth about eight inches. It follows the horses easily; is not so liable to choak in stubble or long grass-sods as others; turns over its ground so as to bury whatever may be upon the surface; is easily handled by the ploughman; and, being of cast iron throughout, does not require the blacksmith to put it in good repair. As a proof of the superior properties of this plough, each of the undersigned have one or more of them in use on their farms, and are of opinion that they are the best ploughs for all purposes, in ground clear of stone, that they ever used, or saw at work.

JAMES THORNTON,
KENDERTON SMITH,
ISAAC W. ROBERTS.

Agricultural Notice.

The Philadelphia Society for promoting Agriculture, contemplate holding the *Exhibition* and *Sale* of live stock, agricultural implements, productions, &c., near the old Rising Sun tavern, on the Germantown Road, on Wednesday and Thursday, the 7th and 8th of October next. Extensive and convenient sheds will be erected for the accommodation and display of stock; and every thing done for the convenience of farmers, which additional means and experience enable the Society to accomplish.

ALG'N. S. ROBERTS,
Secretary of the Com. Arrangem't.

KENDERTON SMITH,
Chairman.

Philadelphia, July 6, 1840.

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*On accompanying this gentleman into his field, where the swarths of clover and timothy had more the appearance of wind-rows, I inquired what was the quantity of Hay per acre which he expected to carry? to which he replied, "I do not know, but this I know, I do not wish for more, and I would not have more if I could."

Notice to Subscribers.

By the publication of the present number, the fourth volume of the Farmers' Cabinet is completed. The four volumes, neatly bound and lettered, and forming an important register of events, and a valuable work of reference to all who are concerned in the cultivation of the soil, may now be obtained of the publishers. Subscribers wishing to complete their sets may do so; and on forwarding to the publishers the numbers which they may have on hand as above, the volumes will be made up, and bound to any pattern.

The first number of the fifth volume of the Cabinet will be published on the 15th of next month, under the title of "The Farmers' Cabinet and American Herd Book, devoted to Agriculture, Horticulture, and Rural Affairs:" and it will be embellished with two engravings, the portraits of a thorough-bred Durham Bull, and the Clydesdale or Farmer's Horse.

It is the wish of the proprietors of the Farmers' Cabinet, to render it a work worthy the notice and support of the state and the country. Already it is identified with the Agricultural Society of Philadelphia, and is become the medium of communication between that body and the agricultural community; and it is their desire still to increase its usefulness. To this end, they will feel pleasure in adopting the proposal, that the Cabinet shall also become the medium of communication between the breeders of fine stock in this and the adjoining states, and more distant parts of the Union, "whereby information relating to that vital branch of rural affairs might become known and be recorded;" as it is believed this city affords greater advantages than any other place for carrying out such a design. They, therefore, offer a portion of its pages, in which to portray, in an improved style of engraving, animals of high blood—the Horse, Cattle, Sheep, Hogs, &c.—taken from drawings made for the purpose, on the following conditions: The breeders or owners to be at the expense of furnishing perfect portraits of the animals, reduced to a scale suitable to the pages of the work, and for which scale they are referred to those specimens already published in this and the two preceding numbers of the Cabinet; with the understanding that they shall be finished in a superior style of penciling, and be real portraits of living animals. The proprietors will then undertake the expense and care of engraving and publishing them, to the best advantage;—accompanying each portrait with the name of the individual, its pedigree, by whom bred or owned—these particulars being, of course, furnished for publication by the owner—and other notices which might be deemed of interest to the breeders of fine stock generally.

The "Cabinet" will still continue to be devoted to whatever is of importance in the pursuits of "Agriculture, Horticulture, and Rural Affairs;" and arrangements have been made to enable the publishers to keep pace with the improved state of those sciences of which it treats. The increasing interest with which the subjects of agriculture and husbandry are viewed at the present moment by all classes of the community, and the spirit of improvement which is gone abroad through the length and breadth of the land, in relation to the culture of the soil, and other legitimate branches of the profession—and especially in the breeding of improved stock—would seem to warrant the proprietors in the expectation of a corresponding feeling in the support of a work devoted, in an especial manner, to those important objects. And they invite the friends of agricultural improvement to a free correspondence in its pages, on all subjects of interest, whether relating to the rearing of cattle, the culture of the soil, or the husbandry of their crops.

Philadelphia, 7th mo. 15th, 1840.

☞Those Subscribers who have not already paid for the fifth volume, will please remit the amount of the bills inclosed in this number, and a receipt will be forwarded to them with the first number of the volume.

Any arrears on account of *back volumes* are to be paid to John Libby, and not to the present publishers.

The quantity of rain which fell during the 6th month, (June,) was ..... 5.95 inches.

John Conrad.

Pennsylvania Hospital, July 1, 1840.

☞We take pleasure in announcing that it is the intention of the Philadelphia Agricultural Society's Committee on Premiums to make arrangements for a grand "Ploughing Match," to take place some time before the day of exhibition of stock, &c., to enable the judges to report and award premiums for the same, on the day appointed for that general purpose. Our friends will then enjoy the opportunity of having the question of the "best plough" set to rest; and the best thanks of the agricultural community are due to the committee for such an occasion—look out, therefore, for the *best plough and ploughing*.

Would the committee permit us to suggest the propriety of submitting the question to the test of the dynanometer, which could, we presume, be obtained through Mr. Prouty for that purpose. Ed.

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